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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,523	07/20/2001	Raymond A. Berard	IRC27514060/	9700

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ATLANTA, GA 30309

EXAMINER

LORENZO, JERRY A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 05/20/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

456

Office Action Summary

Application No.

09/830,523

Applicant(s)

BERARD, RAYMOND A.

Examiner

Jerry A. Lorengo

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☒ Claim(s) 6 and 8-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

(1)

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 3, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,840,773 to Booij et al. in view of U.S. Patent No. 5,605,935 to Parrinello et al. and GB 1,552,626 to Bobe.

Regarding applicant claim 1, Booij et al. disclose a method for processing a floor covering comprising the steps of:

(1) Contacting the floor covering with an extraction agent capable of acting upon specific components of the floor covering (column 5, lines 16-28);

(2) Heating the floor covering and the extraction agent such that certain components of the floor covering are dissolved resulting in solid and liquid floor covering components in mixture (column 5, lines 53-63); and

(3) Separating the solid and liquid floor covering components from one another whereby the liquid components are capable of reuse (column 5, line 64 to column 6, line 12; column 6, lines 51-57).

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Although Booij et al. disclose a process for processing a floor covering, they are primarily concerned with the extraction/removal of the polyamide components of the floor covering which are separated from the other floor covering components followed by reuse of the polyamide into newly processed polyamide.

It would have been obvious to one of ordinary skill in the art at the time of invention, however, to utilize the methodology of Booij et al. to treat a floor covering containing polyurethane, such as that disclosed by Bobe (consisting of a facecloth layer, an intermediate polyurethane layer, formed by the reaction of a polyisocyanate with a polyol, and a thermoplastic backing layer) to remove the polyurethane and enable separation of the facecloth layer from the backing layer, motivated by the fact Parrinello et al. discloses that polyurethane can be recycled by:

(1) Contacting polyurethane with an alcoholizing polyol, i.e., an organic polyol (column 5, lines 31-36)

(2) Heating the polyurethane and the organic polyol such that the polyurethane reverts to a polyol (column 5, lines 36-52); and

(3) Separating out the reverted polyol and reusing it to form new polyurethane by reaction with a polyisocyanate (column 7, lines 36-58).

Regarding applicant claim 2, Parrinello et al. disclose that the polyurethane is liquefied in the presence of the organic polyol by heating the mixture (column 5, lines 36-40).

Regarding applicant claim 3, both Booij et al. and Parrinello et al. disclose that the components to be treated (the floor covering or polyurethane) may be ground prior to contact with the organic polyol (Booij et al. at column 5, lines 16-19; Parrinello et al. at column 5, lines 12-21).

Regarding applicant claim 4, Bobe discloses that the polyurethane in the floor covering makes up a precoat layer disposed between the facecloth layer and the thermoplastic backing (page 1, lines 42-50; page 2, lines 18 to 45).

Regarding applicant claim 7, Bobe discloses that the organic polyol utilized in the formation of the polyurethane layer of the floor covering may comprise diols or triols derived from propylene oxide (page 1, lines 96-99) which is the same as the organic polyol

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(polyoxypropylene polyol) utilized by Parrinello et al. to dissolve or liquefy the polyurethane foam (column 2, line 14).

(2)

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (1), above, in further view of U.S. patent No. 5,096,764 to Terry et al.

Although the references as combined in section (1), above, disclose a floor covering material having a polyurethane binding layer which may be separated and reused through the use of an organic polyol such that the polyurethane is converted into an organic polyol thereby enabling the separation of the facecloth from the backing, they do not specifically disclose that the polyurethane comprises a urethane-modified bitumen.

It would have been obvious to one of ordinary skill in the art at the time of invention, however, to apply the methodology resulting from the references combined in section (1), above, to a floor covering having a polyurethane layer which comprises a urethane-modified bitumen motivated by the fact that Terry et al., also drawn to polyurethane containing floor coverings, discloses that urethane-modified bitumen are known and are useful in the formation of floor coverings, such as carpet tiles, which are used in high moisture and high temperature conditions (column 7, lines 19-28).

(3)

***Allowable Subject Matter***

Claims 6 and 8-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Methods for the separation of structural components from floor coverings through contact of a comminuted or cut floor covering material with an extraction agent under heat, such as that disclosed by U.S. patent No. 5,840,773 to Blooij et al., are known in the art. It is also known, such as disclosed by U.S. Patent No. 5,605,935 to Parrinello et al., to separate polyurethane components from a floor covering through heated contact with an organic polyol whereby the reverted polyurethane, now in the form of a polyol, may be collected and reused to form reconstituted polyurethane by the addition of a polyisocyanate thereto. Although floor coverings

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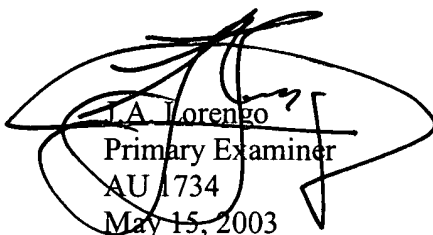
which utilize polyurethanes as a precoat and/or backing, such as taught by U.S. Patent No. 4,657,790 to Wing et al. and GB 1,552,626 to Bobe, are known, none of the prior art of record specifically teaches or suggests such a method wherein a floor covering, comprising a facecloth layer and a polyurethane backing layer, is contacted under heated conditions with an organic polyol such that the polyurethane is at least partially liquefied, whereby the backing layer can be separated from a facecloth layer and then contacted with polyisocyanate to reconstitute the separated backing layer. Although the prior art of record discloses that a backing layer may be separated from a facecloth after a polyurethane precoat disposed therebetween has been converted to a polyol by contact with an organic polyol under heated conditions, none of the prior art of record specifically teaches or suggests the process contemplated by applicant claims 8-15 which require the organic polyol to be applied onto the facecloth layer followed by the pulling of the facecloth away from the backing layer.

(4)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (703) 306-9172. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7115 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



J.A. Lorengo  
Primary Examiner  
AU 1734  
May 15, 2003